have been launched more cheaply with disposable rockets. Indeed, if the American taxpayer had not been forced to subsidize those shuttle satellite launches (wiping out any possible competition that would have had to pay full cost), there might now be a viable private American corporation capable of launching satellites—a boon to the entrepreneurs waiting in line for years for a satellite launch.

NASA has run out of useful work for the shuttle, let alone its successor. So we are bombarded by reports of German and Russian astronauts using the Canadian robot arm to perform ecology experiments. The large P.R. efforts that form in step 5 of all government megascience endeavors have learned that spreading the pork (step 4) now must be both an international and a politically correct endeavor.

Some shuttle experiments—at a cost of about $500 million each—are simply ludicrous. Who cares or will ever care if spiders spin their webs differently in zero gravity? And technology con men are having a field day. One University of Houston professor convinced NASA to spend $2.5 billion on five shuttle flights to make space-grown gallium arsenide (GaAs) semiconductor wafers, the starting material for GaAs computer chips. The flight produced five wafers at a cost of about $100 million each. The promise is that in the near-perfect vacuum of space, the shuttle will produce GaAs semiconductor wafers nearly perfect in crystal structure. Eventually, the space-grown wafer cost is projected to drop to $10,000 per wafer.

I am a member of the board of directors of the largest GaAs chip maker in the United States. Here are the facts:

(1) Current terrestrial GaAs wafers cost $500.

(2) The hypothesized improvement in the crystal structure of space-grown wafers is irrelevant, since the GaAs chip manufacturing process destroys and rebuilds the crystal as part of the process.

(3) All GaAs companies would go out of business if their wafers cost $10,000 each.

The basic problem with megaprogram funding is that particle physicists, space scientists, and big-company technology experts can have their way with a lay Congress that barely comprehends the complex technologies it is funding. And even that minimal comprehension comes only when huge sums are expended on ever-increasing congressional staffs.

After eliminating the big-science megaprograms, Congress should attack the technology subsidies that Secretary of Labor Rober Reich reasonably calls ''corporate welfare''. The corporate subsidy most often touted as a success by the Clinton administration (yes, they speak on both sides of the issue) is Sematech, the Austin-based semiconductor research facility that has been given $1 billion in two five-year grants so far. A reasonably well-run organization, Sematech recently announced it would not seek a third $500-million grant. (Of course, the original Sematech promise was that it would not come back to Congress the second time.) The Clinton administration believes Sematech should be replicated in other industries. But its record is not one that warrants replication:

Sematech has as members only 12 of America's 200 semiconductor companies.

Two of Sematech's original 14 members quit because even with their dues halved by government subsidy they could not justify the investment.

The big companies that control Sematech's board designed the consortium's dues structure to prevent small, entrepreneurial companies from joining. A $20-million chip company that may someday be the next Intel must pay 5 percent of revenue, while Intel itself pays only 0.15 percent of its revenue—a 33-to-1 ratio, which is the primary reason so few companies joined Sematech originally. Of course, Intel, which makes over $1 billion a quarter in pre-tax profits, needs the subsidy a lot less than the small companies that were excluded. But the political system provides the opposite results: Only big companies can muster the lobbying resources to convince Congress to subsidize them. And why would they share the pork with the upstarts?

Sematech used its government subsidy to attack directly the other 100-plus American chip companies that were not Sematech members. After the checks were signed and the TV lights turned off, Sematech began granting funds to companies that make the critical equipment for the production of computer chips—in return for contracts to hold back the most advanced equipment from all but Sematech members for up to one year. (The deals, which Sematech denied repeatedly, were discovered during a lawsuit.) It is no wonder that Sematech insisted on and received antitrust immunity as part of its funding legislation.

If Sematech's silicon-chip subsidy represents the Clinton/Gore model for government subsidies, it's up to the new Republican Congress to stop its replication. Let's not copy a system that allows well-heeled corporations to use their lobbying clout to entrench themselves with taxpayer subsidies, to the detriment of new companies with new ideals.

The flow of bright, well-educated technologists into industry is much more important to American high-tech businesses than are subsidies to prop up ailing giants. And by cutting out science megaprograms and corporate technology subsidies, the new Congress can both cut the federal budget and free up funds to increase university research funding.

Many Silicon Valley venture capitalists—no friends of big government—believe that the defunct DARPA (Defense Advanced Research Projects Agency) was one of the most effective government technology programs. They credit it with funding such winning pre-venture capital investments as the UNIX computer operating system work done by Sun Microsystems founder Bill Joy.

DARPA funded my doctoral studies on transistor physics at Stanford. The high-performance chips I worked on may or may not have improved national defense, but I became one of the hundreds of DARPA-funded Ph.D.s who flooded into Silicon Valley from Stanford and Berkeley. What caused an unlikely agency like DARPA to provide decent return on government investment?

DARPA conducted classified military research, which kept Congress on a need-to-know basis. Thus DARPA projects avoided having to spread the pork or to hire a P.R. staff to maintain viability.

DARPA contracts were awarded by competent technical experts on a merit basis without much political consideration. DARPA also had a ''customer,'' the Pentagon, that had at least a long-run interest in the usefulness of what it funded.

DARPA tended to fund the large number of small programs, rather than wasteful megaprojects. The agency was on the right side of the economic tradeoff that demands the sacrifice of 1,000 chances to fund the next Bill Joy/Sun Microsystems in order to fund one superconducting supercollider.

Unfortunately, today's ARPA, the non-defense version of the old DARPA, is drifting back into politics. Members of Congress fantasize about ''dual use'' (military and commercial) technology, with the hope of picking losers and winners, the latter preferably in their districts. There are debates about where the ''retraining'' funds should be spent when military programs are shut down.

Some of this is inevitable—ARPA's mission is hazier and more politicized that DARPA's. But the agency's best chance for success is if Congress leaves it alone, allowing it to set technical priorities and give out thousands of small grants to universities based only on a peer-review meritocracy.

The new Congress has an opportunity to shrink the federal government and simultaneously help America's technology industries. It involves getting politics out of the laboratory and supporting education on a non-partisan, merit basis.

OPPOSITION TO SUMMER YOUTH PROGRAM RESCISSIONS

HON. JACK QUINN

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Thursday, March 23, 1995

Mr. QUINN. Mr. Speaker, I rise today in opposition to the proposed elimination of the Summer Youth Program. I fully support the program and will fight to restore its funding when the rescissions bill is sent to the conference committee later this year.

At the same time, I encourage private sector businesses to contribute to the Summer Youth Program so they may make a contribution to the communities in which they do business. In these times of tight budgetary constraints, it is my hope that local businesses can assist in ways that the Government can no longer afford.

Although I support the Summer Youth Program, I also saw the need for reducing the deficit. If we continue to spend money we don't have, we will be passing the financial burden on to our children.

Mr. Speaker, I urge all of my colleagues, especially the members of the Appropriations Committee, to work to restore the funds necessary to continue the summer youth program.

FAIR COMPENSATION FOR KRIS MURTY

HON. RONALD D. COLEMAN

OF TEXAS

IN THE HOUSE OF REPRESENTATIVES

Thursday, March 23, 1995

Mr. COLEMAN. Mr. Speaker, today I have introduced legislation which would allow for the Federal Government to right an injustice wrought upon one of its own over 8 years ago. In January 1985, the Department of the Army extended a job offer to Mr. Kris Murty, then of Houston, TX, for a position at Ft. Bliss, TX. He received orders authorizing reimbursement for miscellaneous expenses, unexpired lease expenses, and temporary quarters subsistence expense. It was with this understanding that Mr. Murty accepted the position. Upon his relocation to Ft. Bliss Mr. Murty was awarded an advance for his travel costs.

Several months later, Mr. Murty was notified that the Army had erred. At that time, Mr. Murty was instructed that he must make restitution for the Army's mistake. Without recourse, his wages were garnished.

Mr. Murty acted in good faith with the Department of Army. His acceptance of the position hinged on the Army's assurances that it